

ABSTRACT

A keratome includes a cutting instrument having a cutter head with a reciprocating blade and a cutting edge extending below a sole surface of the cutter head, an automated drive unit mounting the cutting instrument for powered translational movement of at least the cutter head thereof, and a suction ring including an eye ring adapted to be secured to an eye by suction and defining a cornea aperture for presenting the outer layer of the cornea of the eye for cutting. The suction ring has a shoe from which the eye ring extends, the shoe defining a cutting guideway configured for receiving the cutter head in precision mating sliding engagement when the cutting edge of the blade is positioned over the cornea aperture of the eye ring, and an entrance guideway extending from and generally aligned with the cutting guideway, the entrance guideway configured for receiving the cutter head in orienting sliding engagement and positively positioning the cutter head for precision mating sliding engagement with the cutting guideway.

The automated drive unit and the suction ring are configured for releasable attachment when said cutter head is received in the entrance guideway of the suction ring.

The automated drive unit is operable to slidably translate the cutter head into the cutting guideway and to withdraw the cutter head therefrom.